SEQUENCE LISTING

<110> Landes, Gregory M.
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<120> Antibodies Against T Cell Immunoglobulin Domain and Mucin Domain 1 (TIM-1) Antigen and Uses Thereof

<130> 21402-665

<140> 10/805,177
<141> 2004-03-19

<150> US 60/456652
<151> 2003-03-19

<160> 199

<170> PatentIn version 3.5

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aagaaccagt tctccctgaa gctgagctct gtgaccgctg cggacgcggc cgtgtattac 300

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Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Phe Ile Tyr Tyr Thr Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Ala Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asp Tyr Asp Trp Ser Phe His Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala
115 120

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agtcagggca ttagaaatga tttaggctgg tatcagcaga aaccagggaa agcccctaag 180

cgcctgatct atgctgcatc cagtttgcaa agtggggtcc catcaaggtt cagcggcagt 240

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Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
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Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105

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caggctccag ggaaggggct ggagtgggtg gccaacatac agcaagatgg aagtgagaaa 180

tactatgtgg actctgtgag gggccgattc accatctcca gagacaacgc caagaactca 240

ctgtatctgc aaatgaacag cctgagagcc gaggactcgg ctgtgtatta ctgtgcgaga 300

tgggactact ggggccaggg aaccctggtc accgtctcct cagcctccac caagggccca 360

tcggtcttcc ccctggcgcc ctgctccagg agcacctccg agagcacagc ggccctgggc 420

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<213> Homo sapiens

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Tyr
20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Asn Ile Gln Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60

Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Trp Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
100 105 110

Ala

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caaagcctcg tacacagtga tggaaacacc tacttgaatt ggcttcagca gaggccaggc 180

cagcctccaa gactcctaat ttatatgatt tctaaccggt tctctggggt cccagacaga 240

ttcagtggca gtggggcagg gacagatttc acactgaaaa tcagcagggt ggaagctgag 300

gatgtcgggg tttattactg catgcaagct acagaatctc ctcagacgtt cggccaaggg 360

accaaggtgg aaatcaaacg aactgtggct gcaccatctg tcttcatctt cccgccatct 420

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Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Met Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Thr Glu Ser Pro Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 9
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<212> DNA
<213> Homo sapiens

<400> 9
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ctggagtggg ttggccgtat taaaaggaga actgatggtg ggacaacaga ctacgctgca 180

cccgtgaaag gcagattcac catctcaaga gatgattcaa aaaacacgct gtatctgcaa 240

atgaacaacc tgaaaaacga ggacacagcc gtgtattact gtacctcagt cgataatgac 300

gtggactact ggggccaggg aaccctggtc accgtctcct cagcttccac caagggccca 360

tccgtcttcc ccctggcgcc ctgctccagg agcacctccg agagcacagc cgccctgggc 420

tgcctggtca aggactactt ccccgaaccg gtgacggtgt cgtggaactc aggcgccctg 480

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<213> Homo sapiens

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<223> Xaa is any amino acid

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Gly Arg Ile Lys Arg Arg Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

Leu Tyr Leu Gln Met Asn Asn Leu Lys Asn Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Thr Ser Val Asp Asn Asp Val Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala
115

<210> 11
<211> 447
<212> DNA
<213> Homo sapiens

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aagccagggc agtctccaca gctcctgatc tatttgggtt ctaatcgggc ctccggggtc 180

cctgacaggt tcagtggcag tggatcaggc acagatttta cactgaaaat cagcagagtg 240

gaggctgagg atattggtct ttattactgc atgcaagctc tacaaactcc gctcactttc 300

ggcggaggga ccaaggtgga catcaaacga actgtggctg caccatctgt cttcatcttc 360

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<213> Homo sapiens

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<223> Xaa is any amino acid

<400> 12

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1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Ile Gly Leu Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105 110

Arg

<210> 13
<211> 538
<212> DNA
<213> Homo sapiens

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ccagggaagg ggctggagtg ggtttcatac attagaagta gtactagtac catatactat 180

gcagagtccc tgaagggccg attcaccatc tccagcgaca atgccaagaa ttcactatat 240

ctgcaaatga acagcctgag agacgaggac acggctgtgt attactgtgc gcgggacttt 300

gactactggg gccagggaac cctggtcacc gtctcctcag cttccaccaa gggcccatcc 360

gtcttccccc tggcgccctg ctccaggagc acctccgaga gcacagccgc cctgggctgc 420

ctggtcaagg actacttccc cgaaccggtg acggtgtcgt ggaactcagg cgccctgacc 480

agcggcgtgc acaccttccc ggctgtccta cagtcctcag gactctactc cctcagca 538

<210> 14
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<212> PRT
<213> Homo sapiens

<400> 14

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
20 25 30

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

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Ser Tyr Ile Arg Ser Ser Thr Ser Thr Ile Tyr Tyr Ala Glu Ser Leu
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Ser Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110

Ser Ala
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<210> 15
<211> 490
<212> DNA
<213> Homo sapiens

<400> 15

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cttcagcaga ggccaggcca gcctccaaga ctcctaattt ataagatttc tacccggttc      180

tctggggtcc ctgacagatt cagtggcagt ggggcaggga cagatttcac actgaaaatc      240

agcagggtgg agactgacga tgtcgggatt tattactgca tgcaaactac acaaattcct      300

caaatcacct tcggccaagg gacacgactg gagattaaac gaactgtggc tgcaccatct      360

gtcttcatct tcccgccatc tgatgagcag ttgaaatctg gaactgcctc tgttgtgtgc      420

ctgctgaata acttctatcc cagagaggcc aaagtacagt ggaaggtgga taacgccctc      480

caatcgggta                                                             490
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<210> 16
<211> 114
<212> PRT
<213> Homo sapiens

<400> 16

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Glu Ile Gln Leu Thr Gln Ser Pro Leu Ser Ser Pro Val Thr Leu Gly
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Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
            20                  25                  30

Asp Gly Asp Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro
        35                  40                  45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Thr Arg Phe Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Thr Asp Asp Val Gly Ile Tyr Tyr Cys Met Gln Thr
                85                  90                  95

Thr Gln Ile Pro Gln Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys Arg
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<210> 17
<211> 568
<212> DNA
<213> Homo sapiens

<400> 17

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ccaggcaagg ggctgaaatg ggtggcagtt atatggtatg atggaagtaa taaactctat      180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat      240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagattac      300

tatgataata gtagacatca ctgggggttt gactactggg gccagggaac cctggtcacc      360

gtctcctcag cttccaccaa gggcccatcc gtcttccccc tggcgccctg ctccaggagc      420

acctccgaga gcacagccgc cctgggctgc ctggtcaagg actacttccc cgaaccggtg      480

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<210> 18

<211> 124
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<213> Homo sapiens

<400> 18

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
115 120

<210> 19
<211> 472
<212> DNA
<213> Homo sapiens

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aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg caacttacta ctgtcaacag agttacagta cccctccgac gttcggccaa 300

gggaccaagg tggaaatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 360

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420

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<210> 20
<211> 108
<212> PRT
<213> Homo sapiens

<400> 20

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Tyr Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 21
<211> 528
<212> DNA
<213> Homo sapiens

<400> 21
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ggattcactt tcagtaacgc ctggatgacc tgggtccgcc aggctccagg gaaggggctg 120

gagtgggttg gccgtattaa aaggaaaact gatggtggga caacagacta cgctgcaccc 180

gtgaaaggca gattcaccat ctcaagagat gattcagaaa acacgctgta tctgcaaatg 240

aacagcctgg aaaccgagga cacagccgtg tattactgta ccacagtcga taacagtggt 300

gactactggg gccagggaac cctggtcacc gtctcctcag cttccaccaa gggcccatcc 360

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<210> 22
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<223> Xaa is any amino acid

<400> 22

Xaa Xaa Xaa Xaa Xaa Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Gly Arg Ile Lys Arg Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Glu Asn Thr
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Glu Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Thr Thr Val Asp Asn Ser Gly Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala
115

<210> 23
<211> 466
<212> DNA
<213> Homo sapiens

<400> 23
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tatcccagag aggccaaagt acagtggaag gtggataacg ccctca 466

<210> 24
<211> 113
<212> PRT
<213> Homo sapiens

<220>
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<222> (1)..(4)
<223> Xaa is any amino acid

<400> 24

Xaa Xaa Xaa Xaa Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 25
<211> 537
<212> DNA
<213> Homo sapiens

<400> 25
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ccaggcaagg ggctggattg ggtggcagtt atatggtatg atggaagtca taaattctat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctcttt 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtac gcgagatctt 300

gactactggg gccagggaac cctggtcacc gtctcctcag cttccaccaa gggcccatcc 360

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ctggtcaagg actacttccc cgaaccggtg acggtgtcgt ggaactcagg cgccctgacc 480

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<210> 26
<211> 114
<212> PRT
<213> Homo sapiens

<400> 26

Gln Val Gln Leu Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Tyr
20 25 30

Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser His Lys Phe Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
65 70 75 80

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Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Thr Arg Asp Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110

Ser Ala
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<210> 27
<211> 480
<212> DNA
<213> Homo sapiens

<400> 27

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cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca      180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag      240

cctgaagatt gtgcagagtg ttactgtcag caatatggta gctcactccc gctcactttc      300

ggcggaggga ccaaggtgga gatcaaacga actgtggctg caccatctgt cttcatcttc      360

ccgccatctg atgagcagtt gaaatctgga actgcctctg ttgtgtgcct gctgaataac      420

ttctatccca gagaggccaa agtacagtgg gaaggtggga taacgccctc caatcgggta      480
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<210> 28
<211> 110
<212> PRT
<213> Homo sapiens

<400> 28

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Glu Thr Gln Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                  10                  15

Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Asn
            20                  25                  30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60
```

```
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80

Pro Glu Asp Cys Ala Glu Cys Tyr Cys Gln Gln Tyr Gly Ser Ser Leu
                85                  90                  95

Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105                 110
```

<210> 29
<211> 542
<212> DNA
<213> Homo sapiens

<400> 29

```
gtccagtgtc aggtgcagct ggtggagtct gggggaggcg tggtccagcc tgggaggtcc       60

ctgagactct cctgtgcagc gtctggattc accttcagta gctatggcat gcactgggtc      120

cgccaggctc caggcaaggg gctggagtgg gtggcagtta tatggtatga tggaagtcat      180

aaatactatg cagactccgt gaagggccga ttcaccatct ccagagacaa ttccaagaac      240

acgctgtatc tgcaaatgaa cagcctgaga gccgaggaca cggctgtgta ttactctgcg      300

agagattact atgatacgag tcggcatcac tgggggtttg actgctgggg ccagggaacc      360

ctggtcaccg tctcctctgc ttccaccaag ggcccatccg tcttcccccc ggcgccctgc      420

tccaggagca cctccgagag cacagccgcc ctgggctgcc tggtcaagga ctacttcccc      480

gaaccggtga cggtgtcgtg gaactcaggc gccctgacca gcggcgtgca caccttcccg      540

gc                                                                     542
```

<210> 30
<211> 124
<212> PRT
<213> Homo sapiens

<400> 30

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
```

```
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser His Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Ser
                85                  90                  95

Ala Arg Asp Tyr Tyr Asp Thr Ser Arg His His Trp Gly Phe Asp Cys
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
        115                 120
```

<210> 31
<211> 521
<212> DNA
<213> Homo sapiens

<400> 31
cagctcctgg ggctgctaat gctctgggtc cctggatcca gtgaggaaat tgtgatgacc 60

cagactccac tctccctgcc cgtcaccct ggagagccgg cctccatctc ctgcaggtct 120

agtcagagcc tcttggatag tgaagatgga aacacctatt tggactggta cctgcagaag 180

ccagggcagt ctccacagct cctgatctat acgctttccc atcgggcctc tggagtccca 240

gacaggttca gtggcagtgg gtcaggcact gatttcacac tgaaaatcag cagggtggag 300

gctgaggatg ttggagttta ttgctgcatg caacgtgtag agtttcctat caccttcggc 360

caagggacac gactggagat taaacgaact gtggctgcac catctgtctt catcttcccg 420

ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc 480

tatcccagag aggccaaagt acagtggaag gtggataacg c 521

<210> 32
<211> 114
<212> PRT
<213> Homo sapiens

<400> 32

```
Glu Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15
```

```
Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
            20                  25                  30

Glu Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
        35                  40                  45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser His Arg Ala Ser Gly Val
    50                  55                  60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65                  70                  75                  80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Cys Cys Met Gln
                85                  90                  95

Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys Arg
```

<210> 33
<211> 547
<212> DNA
<213> Homo sapiens

<400> 33
cagtcgggcc caagactggt gaagccttca cagaccctgt ccctcacctg cactgtctct 60

ggtggctcca tcagtagtga tggttactac tggagctgga tccgccagca cccagggaag 120

ggcctggagt ggattgggta catctattac agtgggagca ccttctacaa cccgtccctc 180

aagagtcgag ttgccatatc agtggacacg tctaagaacc agttctccct gaagctgagc 240

tctgtgactg ccgcggacac ggccgtgtat tactgtgcga gagaatcccc tcatagcagc 300

aactggtact cgggctttga ctgctggggc cagggaaccc tggtcaccgt ctcctcagct 360

tccaccaagg gcccatccgt cttccccctg gcgccctgct ccaggagcac ctccgagagc 420

acagccgccc tgggctgcct ggtcaaggac tactttcccc gaaccggtga cggtgtcgtg 480

gaactcaggc gccctgacca gcggcgtgca caccttcccg gctgtcctac agtcctcagg 540

actctct 547

<210> 34
<211> 125
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(5)
<223> Xaa is any amino acid

<400> 34

Xaa Xaa Xaa Xaa Xaa Gln Ser Gly Pro Arg Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Asp
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Phe Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Ala Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Glu Ser Pro His Ser Ser Asn Trp Tyr Ser Gly Phe Asp
100 105 110

Cys Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
115 120 125

<210> 35
<211> 450
<212> DNA
<213> Homo sapiens

<400> 35
actcagtctc cagactttca gtctgtgact ccaaaggaga aagtcaccat cacctgccgg 60

gccagtcaga gcattggtag taggttacac tggtaccagc agaaaccaga tcagtctcca 120

aagctcctca tcaagtatgc ttcccagtcc ttctcagggg tcccctcgag gttcagtggc 180

agtggatctg ggacagattt cacctcacc atcaatagcc tggaagctga agatgctgca 240

acgtattact gtcatcagag tagtaattta ccattcactt tcggccctgg gaccaaagtg 300

gatatcaaac gaactgtggc tgcaccatct gtcttcatct tcccgccatc tgatgagcag 360

ttgaaatctg gaactgcctc tgttgtgtgc ctgctgaata acttctatcc cagagaggcc 420

aaagtacagt ggaaggtgga taacgccctc 450

<210> 36
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 36

Xaa Xaa Xaa Xaa Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Arg
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys His Gln Ser Ser Asn Leu Pro Phe
85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
100 105

<210> 37
<211> 534
<212> DNA
<213> Homo sapiens

<400> 37
caggtgcagc tggtggaggc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 60

tcctgtgcag cgtctggatt caccttcaga agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctgaaatg ggtggcagtt atatggtatg atggaagtaa taaatactat 180

acagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgt gagagattac 300

tatgataata gtagacatca ctgggggttt gactactggg gccagggaac cctggtcacc 360

gtctcctcag cttccaccaa gggcccatcc gtcttccccc tggcgccctg ctccaggagc 420

acctccgaga gcacagccgc cctgggctgc ctggtcaagg actacttccc cgaaccggtg 480

acggtgtcgt ggaactcagg cgccctgacc aggcggcgtg cacaccttcc cggc 534

<210> 38
<211> 124
<212> PRT
<213> Homo sapiens

<400> 38

Gln Val Gln Leu Val Glu Ala Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Tyr
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Thr Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Val Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
115 120

<210> 39
<211> 470
<212> DNA
<213> Homo sapiens

<400> 39
gacatccaga tgacccagtc tccatcctcc cggtgtgcat ccgtaggaga cagagtcacc 60

atcacttgcc gggcaagtca gggcatcaga aatgatttag cttggtatca gcagaaacca 120

gggaaagccc ctaagcgcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagcg gcagtagatc tgggacagaa ttcactctca caatcagcag cctgcagcct 240

gaagattttg cagcttatta ctgtctccag cataatagtt accctcccag ttttggccag 300

gggaccaagc tggagatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 360

tctgatgagc agttgaaatc tggaactgct agcgttgtgt gcctgctgaa taacttctat 420

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg 470

<210> 40
<211> 108
<212> PRT
<213> Homo sapiens

<400> 40

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Arg Cys Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Arg Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Ala Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Pro
85 90 95

Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg

100 105

<210> 41
<211> 514
<212> DNA
<213> Homo sapiens

<400> 41
catgtgcagg tgcagctggt ggagtctggg ggaggcgtgg tccagcctgg gaggtccctg 60

agactctcct gtgcagcgtc tggattcatc ttcagtcgct atggcatgca ctgggtccgc 120

caggctccag gcaaggggct gaaatgggtg gcagttatat ggtatgatgg aagtaataaa 180

ctctatgcag actccgtgaa gggccgattc accatctcca gagacaattc caagaacacg 240

ctgtatctgc aaatgaacag cctgagagcc gaggacacgg ctgtgtatta ctgtgcgaga 300

gattactatg ataatagtag acatcactgg gggtttgact actggggcca gggaaccctg 360

gtcaccgtct cctcagcttc caccaagggc ccatccgtct tccccctggc gccctgctcc 420

aggagcacct ccgagagcac agccgccctg ggctgcctgg tcaaggacta cttccccgaa 480

ccggtgacgg tgtcgtggaa ctcaggcgcc ctga 514

<210> 42
<211> 124
<212> PRT
<213> Homo sapiens

<400> 42

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Ser Arg Tyr
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

```
Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
            100                 105                 110


Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
        115                 120


<210>  43
<211>  523
<212>  DNA
<213>  Homo sapiens

<400>  43
tcagctcctg gggctgctaa tgctctgggt ccctggatca gtgaggatat tgtgatgacc       60

cagactccac tctccctgcc cgtcaccccc ggagagccgg cctccatctc ctgcaggtct      120

agtcggagcc tcttggatag tgatgatgga aacacctatt tggactggta cctgcagaag      180

ccagggcagt ctccacagct cctgatctac acgctttcct atcgggcctc tggagtccca      240

gacaggttca gtggcagtgg gtcaggcact gatttcacac tgaaaatcag cagggtggag      300

gctgaggatg ttggagttta ttactgcatg caacgtgtag agtttcctat caccttcggc      360

caagggacac gactggagat taaacgaact gtggctgcac catctgtctt catcttcccg      420

ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc      480

tatcccagag aggccaaagt acagtggaag gtggataacg cct                        523


<210>  44
<211>  114
<212>  PRT
<213>  Homo sapiens

<400>  44

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15


Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Leu Asp Ser
            20                  25                  30


Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
        35                  40                  45


Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val
    50                  55                  60
```

```
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65                  70                  75                  80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                85                  90                  95

Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys Arg
```

<210> 45
<211> 546
<212> DNA
<213> Homo sapiens

<400> 45
gagcagtcgg ggggcggcgt ggtccagcct gggaggtccc tgagactctc ctgtgcagcg 60

tctggattca ccttcagtag ctatggcatg tactgggtcc gccaggctcc aggcaagggg 120

ctggagtggg tggcagttat atggtatgat ggaagcaata aatactatgc agactccgtg 180

aagggccgat tcaccatctc cagagacaat tccaagaaca cgctgtatct gcaaatgaac 240

agcctgagag ccgaggacac ggctgtgtat tactgtgcga gggatttcta tgatagtagt 300

cgttaccact acggtatgga cgtctggggc caagggacca cggtcaccgt ctcctcagct 360

tccaccaagg gcccatccgt cttccccctg gcgccctgct ccaggagcac ctccgagagc 420

acagccgccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 480

aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 540

ctctct 546

<210> 46
<211> 124
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 46

```
Xaa Xaa Xaa Xaa Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Phe Tyr Asp Ser Ser Arg Tyr His Tyr Gly Met Asp Val
            100                 105                 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
        115                 120
```

<210> 47
<211> 419
<212> DNA
<213> Homo sapiens

<400> 47
actcagtgtc cactctccct gcccgtcacc cctggagagc cggcctccat ctcctgcagg 60

tctagtcaga gcctcttgga tagtgatgat ggaaacacct atttggactg gtacctgcag 120

aagccagggc agtctccaca gctcctgatc tatacggttt cctatcgggc ctctggagtc 180

ccagacaggt tcagtggcag tgggtcaggc actgatttca cactgaaaat cagcagggtg 240

gaggctgagg atgttggagt ttattactgc atgcaacgta tagagtttcc gatcaccttc 300

ggccaaggga cccgactgga gattaaacga actgtggctg caccatctgt cttcatcttc 360

ccgccatctg atgagcagtt gaaatctgga actgcctctg ttgtgtgcct gctgaataa 419

<210> 48
<211> 114
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 48

Xaa Xaa Xaa Xaa Thr Gln Cys Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Val Ser Tyr Arg Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Ile Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys Arg

<210> 49
<211> 1428
<212> DNA
<213> Homo sapiens

<400> 49
cggccgccta tttacccaga gacagggaga ggctcttctg tgtgtagtgg ttgtgcagag 60

cctcatgcat cacggagcat gagaagacat tcccctcctg ccacctgctc ttgtccacgg 120

ttagcctgct gtagaggaag aaggagccgt cggagtccag cacgggaggc gtggtcttgt 180

agttgttctc cggctgccca ttgctctccc actccacggc gatgtcgctg gggtagaagc 240

ctttgaccag gcaggtcagg ctgacctggt tcttggtcat ctcctcctgg gatgggggca 300

gggtgtacac ctgtggctct cggggctgcc ctttggcttt ggagatggtt ttctcgatgg 360

aggacgggag gcctttgttg gagaccttgc acttgtactc cttgccgttc agccagtcct 420

ggtgcaggac ggtgaggacg ctgaccacac ggtacgtgct gttgaactgc tcctcccgcg 480

gctttgtctt ggcattatgc acctccacgc catccacgta ccagttgaac tggacctcgg 540

ggtcttcctg gctcacgtcc accaccacgc acgtgacctc aggggtccgg gagatcatga 600

gagtgtcctt gggttttggg gggaacagga agactgatgg tccccccagg aactcaggtg 660

ctgggcatga tgggcatggg ggaccatatt tggactcaac tctcttgtcc accttggtgt 720

tgctgggctt gtgatctacg ttgcaggtgt aggtcttcgt gcccaagctg ctggagggca 780

cggtcaccac gctgctgagg gagtagagtc ctgaggactg taggacagcc gggaaggtgt 840

gcacgccgct ggtcagggcg cctgagttcc acgacaccgt caccggttcg gggaagtagt 900

ccttgaccag gcagcccagg gcggctgtgc tctcggaggt gctcctggag cagggcgcca 960

gggggaagac ggatgggccc ttggtggaag ctgaggagac ggtgaccagg gttccctggc 1020

cccagtagtc aaacccccag tgatgtctac tattatcata gtaatctctc gcacagtaat 1080

acacagccgt gtcctcggct ctcaggctgt tcatttgcag atacagcgtg ttcttggaat 1140

tgtctctgga gatggtgaat cggcccttca cggagtctgc atagagttta ttacttccat 1200

cataccatat aactgccacc catttcagcc ccttgcctgg agcctggcgg acccagtgca 1260

tgccatagcg actgaagatg aatccagacg ctgcacagga gagtctcagg gacctcccag 1320

gctggaccac gcctcccccа gactccacca gctgcacctg acactggaca ccttttaaaa 1380

tagccacaag aaaaagccag ctcagcccaa actccatggt ggtcgact 1428

<210> 50
<211> 469
<212> PRT
<213> Homo sapiens

<400> 50

Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1 5 10 15

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe
35 40 45

```
Ser Arg Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60

Lys Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala
65                  70                  75                  80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
                85                  90                  95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly
        115                 120                 125

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
    130                 135                 140

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
145                 150                 155                 160

Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
                165                 170                 175

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
            180                 185                 190

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
        195                 200                 205

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr
    210                 215                 220

Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
225                 230                 235                 240

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe
                245                 250                 255

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            260                 265                 270
```

```
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        275                 280                 285

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
    290                 295                 300

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
305                 310                 315                 320

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                325                 330                 335

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
            340                 345                 350

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        355                 360                 365

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
    370                 375                 380

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
385                 390                 395                 400

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                405                 410                 415

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
            420                 425                 430

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
        435                 440                 445

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    450                 455                 460

Leu Ser Leu Gly Lys
465
```

<210> 51
<211> 741
<212> DNA
<213> Homo sapiens

<400> 51
agtcgaccac catggaaacc ccagcgcagc ttctcttcct cctgctactc tggctcccag 60

ataccaccgg agatattgtg atgacccaga ctccactctc cctgcccgtc acccctggag 120

agccggcctc catctcctgc aggtctagtc ggagcctctt ggatagtgat gatggaaaca 180

cctatttgga ctggtacctg cagaagccag ggcagtctcc acagctcctg atctacacgc 240

tttcctatcg ggcctctgga gtcccagaca ggttcagtgg cagtgggtca ggcactgatt 300

tcacactgaa aatcagcagg gtggaggctg aggatgttgg agtttattac tgcatgcaac 360

gtgtagagtt tcctatcacc ttcggccaag ggacacgact ggagattaaa cgaactgtgg 420

ctgcaccatc tgtcttcatc ttcccgccat ctgatgagca gttgaaatct ggaactgcct 480

ctgttgtgtg cctgctgaat aacttctatc ccagagaggc caaagtacag tggaaggtgg 540

ataacgccct ccaatcgggt aactcccagg agagtgtcac agagcaggac agcaaggaca 600

gcacctacag cctcagcagc accctgacgc tgagcaaagc agactacgag aaacacaaag 660

tctacgcctg cgaagtcacc catcagggcc tgagctcgcc cgtcacaaag agcttcaaca 720

ggggagagtg ttaggcggcc g 741

<210> 52
<211> 240
<212> PRT
<213> Homo sapiens

<400> 52

Met Glu Thr Pro Ala Gln Leu Leu Phe Leu Leu Leu Leu Trp Leu Pro
1 5 10 15

Asp Thr Thr Gly Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro
20 25 30

Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser
35 40 45

Leu Leu Asp Ser Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln
50 55 60

Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg
65 70 75 80

Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

```
Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr
            100                 105                 110

Tyr Cys Met Gln Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr
        115                 120                 125

Arg Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
    130                 135                 140

Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
145                 150                 155                 160

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
                165                 170                 175

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
            180                 185                 190

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
        195                 200                 205

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
    210                 215                 220

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225                 230                 235                 240
```

<210> 53
<211> 789
<212> DNA
<213> Homo sapiens

<400> 53
tctgtaaagg ttggtggaga ggcaggtcca tctgtcacac taccctgcca ctacagtgga 60

gctgtcacat caatgtgctg gaatagaggc tcatgttctc tattcacatg ccaaaatggc 120

attgtctgga ccaatggaac ccacgtcacc tatcggaagg acacacgcta taagctattg 180

ggggaccttt caagaaggga tgtctctttg accatagaaa atacagctgt gtctgacagt 240

ggcgtatatt gttgccgtgt tgagcaccgt gggtggttca atgacatgaa aatcaccgta 300

tcattggaga ttgtgccacc caaggtcacg actactccaa ttgtcacaac tgttccaacc 360

gtcacgactg ttcgaacgag caccactgtt ccaacgacaa cgactgttcc aacgacaact 420

gttccaacaa caatgagcat tccaacgaca acgactgttc cgacgacaat gactgtttca 480

acgacaacga gcgttccaac gacaacgagc attccaacaa caacaagtgt tccagtgaca 540

acaacggtct ctacctttgt tcctccaatg cctttgccca ggcagaacca tgaaccagta 600

gccacttcac catcttcacc tcagccagca gaaacccacc ctacgacact gcagggagca 660

ataaggagag aacccaccag ctcaccattg tactcttaca caacagatgg gaatgacacc 720

gtgacagagt cttcagatgg cctttggaat aacaatcaaa ctcaactgtt cctagaacat 780

agtctactg 789

<210> 54
<211> 263
<212> PRT
<213> Homo sapiens

<400> 54

Ser Val Lys Val Gly Gly Glu Ala Gly Pro Ser Val Thr Leu Pro Cys
1 5 10 15

His Tyr Ser Gly Ala Val Thr Ser Met Cys Trp Asn Arg Gly Ser Cys
20 25 30

Ser Leu Phe Thr Cys Gln Asn Gly Ile Val Trp Thr Asn Gly Thr His
35 40 45

Val Thr Tyr Arg Lys Asp Thr Arg Tyr Lys Leu Leu Gly Asp Leu Ser
50 55 60

Arg Arg Asp Val Ser Leu Thr Ile Glu Asn Thr Ala Val Ser Asp Ser
65 70 75 80

Gly Val Tyr Cys Cys Arg Val Glu His Arg Gly Trp Phe Asn Asp Met
85 90 95

Lys Ile Thr Val Ser Leu Glu Ile Val Pro Pro Lys Val Thr Thr Thr
100 105 110

Pro Ile Val Thr Thr Val Pro Thr Val Thr Thr Val Arg Thr Ser Thr
115 120 125

Thr Val Pro Thr Thr Thr Thr Thr Val Pro Thr Thr Thr Val Pro Thr Thr
130 135 140

```
Met Ser Ile Pro Thr Thr Thr Thr Val Pro Thr Thr Met Thr Val Ser
145                 150                 155                 160

Thr Thr Thr Ser Val Pro Thr Thr Thr Ser Ile Pro Thr Thr Thr Ser
                165                 170                 175

Val Pro Val Thr Thr Thr Val Ser Thr Phe Val Pro Pro Met Pro Leu
            180                 185                 190

Pro Arg Gln Asn His Glu Pro Val Ala Thr Ser Pro Ser Ser Pro Gln
        195                 200                 205

Pro Ala Glu Thr His Pro Thr Thr Leu Gln Gly Ala Ile Arg Arg Glu
    210                 215                 220

Pro Thr Ser Ser Pro Leu Tyr Ser Tyr Thr Thr Asp Gly Asn Asp Thr
225                 230                 235                 240

Val Thr Glu Ser Ser Asp Gly Leu Trp Asn Asn Asn Gln Thr Gln Leu
                245                 250                 255

Phe Leu Glu His Ser Leu Leu
            260
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<210> 55
<211> 114
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (99)..(100)
<223> Xaa is any amino acid

<400> 55

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
```

```
Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Xaa Xaa Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110

Ser Ala
```

<210> 56
<211> 124
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (98)..(100)
<223> Xaa is any amino acid

<220>
<221> MISC_FEATURE
<222> (105)..(107)
<223> Xaa is any amino acid

<400> 56

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
```

65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Xaa Xaa Xaa Tyr Asp Ser Ser Xaa Xaa Xaa Tyr Gly Met Asp Val
100 105 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala
115 120

<210> 57
<211> 125
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (100)..(103)
<223> Xaa is any amino acid

<220>
<221> MISC_FEATURE
<222> (109)..(110)
<223> Xaa is any amino acid

<400> 57

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

```
Cys Ala Arg Xaa Xaa Xaa Xaa Ser Ser Ser Trp Tyr Xaa Xaa Phe Asp
            100                 105                 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
        115                 120                 125


<210>  58
<211>  124
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (105)..(109)
<223>  Xaa is any amino acid

<400>  58

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Tyr Tyr Asp Ser Ser Xaa Xaa Xaa Xaa Xaa Phe Asp Tyr
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala
        115                 120


<210>  59
<211>  119
<212>  PRT
<213>  Homo sapiens
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<220>
<221> MISC_FEATURE
<222> (100)..(101)
<223> Xaa is any amino acid

<220>
<221> MISC_FEATURE
<222> (103)..(105)
<223> Xaa is any amino acid

<400> 59

```
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
            20                  25                  30


Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45


Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60


Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80


Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95


Tyr Cys Thr Xaa Xaa Asp Xaa Xaa Xaa Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110


Leu Val Thr Val Ser Ser Ala
        115
```

<210> 60
<211> 121
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (100)..(102)
<223> Xaa is any amino acid

<220>
<221> MISC_FEATURE
<222> (104)..(106)
<223> Xaa is any amino acid

<400> 60

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Val Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Xaa Xaa Xaa Trp Xaa Xaa Xaa Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala
115 120

<210> 61
<211> 119
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (101)..(103)
<223> Xaa is any amino acid

<400> 61

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala

```
            20                  25                  30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Gly Arg Ile Lys Ser Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65                  70                  75                  80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95

Tyr Cys Thr Thr Xaa Xaa Xaa Ser Gly Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Ala
        115


<210>  62
<211>  113
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (099)..(099)
<223>  Xaa is any amino acid

<400>  62

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Asn Ile Lys Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
```

65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Xaa Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
100 105 110

Ala

<210> 63
<211> 114
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (98)..(99)
<223> Xaa is any amino acid

<400> 63

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Tyr Ile Ser Ser Ser Ser Ser Thr Ile Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Xaa Xaa Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110

Ser Ala

<210> 64
<211> 110
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (96)..(97)
<223> Xaa is any amino acid

<400> 64

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Xaa
85 90 95

Xaa Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
100 105 110

<210> 65
<211> 113
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (100)..(101)
<223> Xaa is any amino acid

<400> 65

```
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95

Leu Gln Thr Xaa Xaa Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110

Arg
```

<210> 66
<211> 108
<212> PRT
<213> Homo sapiens

<400> 66

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80
```

```
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 67
<211> 114
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (101)..(101)
<223> Xaa is any amino acid

<400> 67

```
Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
1               5                   10                  15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
            20                  25                  30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
        35                  40                  45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
                85                  90                  95

Thr Gln Phe Pro Xaa Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys Arg
```

<210> 68
<211> 108

<212> PRT
<213> Homo sapiens

<400> 68

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 69
<211> 113
<212> PRT
<213> Homo sapiens

<400> 69

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Ser Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
20 25 30

Asp Gly Asn Thr Tyr Leu Ser Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Thr Gln Phe Pro Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 70
<211> 114
<212> PRT
<213> Homo sapiens

<400> 70

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Ile Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys Arg

<210> 71
<211> 108
<212> PRT

<213> Homo sapiens

<400> 71

```
Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1               5                   10                  15


Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
            20                  25                  30


Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
        35                  40                  45


Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60


Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
65                  70                  75                  80


Glu Asp Ala Ala Thr Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro Phe
                85                  90                  95


Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
            100                 105
```

<210> 72
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (96)..(97)
<223> Xaa is any amino acid

<400> 72

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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15


Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30


Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45
```

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Xaa
85 90 95

Xaa Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 73
<211> 16
<212> DNA
<213> Homo sapiens

<400> 73
ttactatgat aatagt 16

<210> 74
<211> 15
<212> DNA
<213> Homo sapiens

<400> 74
agacatcact ggggg 15

<210> 75
<211> 17
<212> DNA
<213> Homo sapiens

<400> 75
atagcagcaa ctggtac 17

<210> 76
<211> 16
<212> DNA
<213> Homo sapiens

<400> 76
ttactatgat aatagt 16

<210> 77
<211> 15
<212> DNA
<213> Homo sapiens

<400> 77
agacatcact ggggg 15

<210> 78
<211> 16
<212> DNA
<213> Homo sapiens

<400> 78
ttactatgat aatagt 16

<210> 79
<211> 15
<212> DNA
<213> Homo sapiens

<400> 79
agacatcact ggggg 15

<210> 80
<211> 13
<212> DNA
<213> Homo sapiens

<400> 80
ctatgatagt agt 13

<210> 81
<211> 11
<212> DNA
<213> Homo sapiens

<400> 81
ttactatgat a 11

<210> 82
<211> 20
<212> DNA
<213> Homo sapiens

<400> 82
cgagtcggca tcactggggg 20

<210> 83
<211> 23
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> (21)..(21)
<223> n is inosine

<400> 83
caggtgcagc tggagcagtc ngg 23

<210> 84
<211> 24
<212> DNA
<213> Homo sapiens

<400> 84
gctgagggag tagagtcctg agga 24

<210> 85
<211> 19
<212> DNA
<213> Homo sapiens

<400> 85
cacaccgcgg tcacatggc 19

<210> 86
<211> 20
<212> DNA
<213> Homo sapiens

<400> 86
ctactctagg gcacctgtcc 20

<210> 87
<211> 14
<212> PRT
<213> Homo sapiens

<400> 87

Pro Met Pro Leu Pro Arg Gln Asn His Glu Pro Val Ala Thr
1 5 10

<210> 88
<211> 12
<212> PRT
<213> Homo sapiens

<400> 88

Pro Met Pro Leu Pro Arg Gln Asn His Glu Pro Val
1 5 10

<210> 89

<211> 10
<212> PRT
<213> Homo sapiens

<400> 89

Pro Met Pro Leu Pro Arg Gln Asn His Glu
1 5 10

<210> 90
<211> 8
<212> PRT
<213> Homo sapiens

<400> 90

Pro Met Pro Leu Pro Arg Gln Asn
1 5

<210> 91
<211> 6
<212> PRT
<213> Homo sapiens

<400> 91

Pro Met Pro Leu Pro Arg
1 5

<210> 92
<211> 12
<212> PRT
<213> Homo sapiens

<400> 92

Pro Leu Pro Arg Gln Asn His Glu Pro Val Ala Thr
1 5 10

<210> 93
<211> 10
<212> PRT
<213> Homo sapiens

<400> 93

Pro Arg Gln Asn His Glu Pro Val Ala Thr
1 5 10

<210> 94
<211> 8
<212> PRT

<213> Homo sapiens

<400> 94

Gln Asn His Glu Pro Val Ala Thr
1 5

<210> 95
<211> 6
<212> PRT
<213> Homo sapiens

<400> 95

His Glu Pro Val Ala Thr
1 5

<210> 96
<211> 7
<212> PRT
<213> Homo sapiens

<400> 96

Pro Leu Pro Arg Asn His Glu
1 5

<210> 97
<211> 6
<212> PRT
<213> Homo sapiens

<400> 97

Leu Pro Arg Gln Asn His
1 5

<210> 98
<211> 10
<212> PRT
<213> Homo sapiens

<400> 98

Pro Met Pro Ala Pro Arg Gln Asn His Glu
1 5 10

<210> 99
<211> 10
<212> PRT
<213> Homo sapiens

<400> 99

Pro Met Pro Leu Ala Arg Gln Asn His Glu
1 5 10

<210> 100
<211> 10
<212> PRT
<213> Homo sapiens

<400> 100

Pro Met Pro Leu Pro Ala Gln Asn His Glu
1 5 10

<210> 101
<211> 10
<212> PRT
<213> Homo sapiens

<400> 101

Pro Met Pro Leu Pro Arg Ala Asn His Glu
1 5 10

<210> 102
<211> 10
<212> PRT
<213> Homo sapiens

<400> 102

Pro Met Pro Leu Pro Arg Gln Ala His Glu
1 5 10

<210> 103
<211> 10
<212> PRT
<213> Homo sapiens

<400> 103

Pro Met Pro Leu Pro Arg Gln Asn Ala Glu
1 5 10

<210> 104
<211> 8
<212> PRT
<213> Homo sapiens

<400> 104

Pro Leu Pro Arg Gln Asn His Glu
1 5

<210> 105
<211> 7
<212> PRT
<213> Homo sapiens

<400> 105

Leu Pro Arg Gln Asn His Glu
1 5

<210> 106
<211> 8
<212> PRT
<213> Homo sapiens

<400> 106

Pro Leu Pro Arg Gln Asn His Glu
1 5

<210> 107
<211> 7
<212> PRT
<213> Homo sapiens

<400> 107

Leu Pro Arg Gln Asn His Glu
1 5

<210> 108
<211> 882
<212> DNA
<213> Homo sapiens

<400> 108
atgaaatacc tgctgccgac cgctgctgct ggtctgctgc tcctcgctgc ccagccggcc 60

atggccgata ttgtgatgac ccagactcca ctctccctgc ccgtcacccc tggagagccg 120

gcctccatct cctgcaggtc tagtcggagc ctcttggata gtgatgatgg aaacacctat 180

ttggactggt acctgcagaa gccagggcag tctccacagc tcctgatcta cacgctttcc 240

tatcgggcct ctggagtccc agacaggttc agtggcagtg ggtcaggcac tgatttcaca 300

ctgaaaatca gcagggtgga ggctgaggat gttggagttt attactgcat gcaacgtgta 360

gagtttccta tcaccttcgg ccaagggaca cgactggaga ttaaactttc cgcggacgat 420

gcgaaaaagg atgctgcgaa gaaagatgac gctaagaaag acgatgctaa aaaggacctc 480

caggtgcagc tggtggagtc tgggggaggc gtggtccagc ctgggaggtc cctgagactc 540

tcctgtgcag cgtctggatt catcttcagt cgctatggca tgcactgggt ccgccaggct 600

ccaggcaagg ggctgaaatg ggtggcagtt atatggtatg atggaagtaa taaactctat 660

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 720

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagattac 780

tatgataata gtagacatca ctgggggttt gactactggg gccagggaac cctggtcacc 840

gtctcctcag ctagcgatta taaggacgat gatgacaaat ag 882

<210> 109
<211> 271
<212> PRT
<213> Homo sapiens

<400> 109

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys Leu Ser Ala Asp Asp Ala Lys Lys Asp Ala Ala Lys Lys Asp Asp
115 120 125

Ala Lys Lys Asp Asp Ala Lys Lys Asp Leu Gln Val Gln Leu Val Glu

```
    130                 135                 140

Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys
145                 150                 155                 160

Ala Ala Ser Gly Phe Ile Phe Ser Arg Tyr Gly Met His Trp Val Arg
                165                 170                 175

Gln Ala Pro Gly Lys Gly Leu Lys Trp Val Ala Val Ile Trp Tyr Asp
            180                 185                 190

Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile
        195                 200                 205

Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu
    210                 215                 220

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Tyr Tyr Asp
225                 230                 235                 240

Asn Ser Arg His His Trp Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
                245                 250                 255

Val Thr Val Ser Ser Ala Ser Asp Tyr Lys Asp Asp Asp Asp Lys
            260                 265                 270
```

<210> 110
<211> 1560
<212> DNA
<213> Homo sapiens

<400> 110
atggaaaccc cagcgcagct tctcttcctc ctgctactct ggctcccaga taccaccgga 60

gatattgtga tgacccagac tccactctcc ctgcccgtca cccctggaga gccggcctcc 120

atctcctgca ggtctagtcg gagcctcttg gatagtgatg atggaaacac ctatttggac 180

tggtacctgc agaagccagg gcagtctcca cagctcctga tctacacgct ttcctatcgg 240

gcctctggag tcccagacag gttcagtggc agtgggtcag gcactgattt cacactgaaa 300

atcagcaggg tggaggctga ggatgttgga gtttattact gcatgcaacg tgtagagttt 360

cctatcacct tcggccaagg gacacgactg gagattaaag gtggtggtgg ttctggcggc 420

ggcggctccg gtggtggtgg ttcccaggtg cagctggtgg agtctggggg aggcgtggtc 480

cagcctggga ggtccctgag actctcctgt gcagcgtctg gattcatctt cagtcgctat 540

ggcatgcact gggtccgcca ggctccaggc aaggggctga aatgggtggc agttatatgg 600

tatgatggaa gtaataaact ctatgcagac tccgtgaagg gccgattcac catctccaga 660

gacaattcca agaacacgct gtatctgcaa atgaacagcc tgagagccga ggacacggct 720

gtgtattact gtgcgagaga ttactatgat aatagtagac atcactgggg gtttgactac 780

tggggccagg gaaccctggt caccgtctcc tcaggaggtg gtggatccga tatcaaactg 840

cagcagtcag gggctgaact ggcaagacct ggggcctcag tgaagatgtc ctgcaagact 900

tctggctaca cctttactag gtacacgatg cactgggtaa aacagaggcc tggacagggt 960

ctggaatgga ttggatacat taatcctagc cgtggttata ctaattacaa tcagaagttc 1020

aaggacaagg ccacattgac tacagacaaa tcctccagca cagcctacat gcaactgagc 1080

agcctgacat ctgaggactc tgcagtctat tactgtgcaa gatattatga tgatcattac 1140

tgccttgact actggggcca aggcaccact ctcacagtct cctcagtcga aggtggaagt 1200

ggaggttctg gtggaagtgg aggttcaggt ggagtcgacg acattcagct gacccagtct 1260

ccagcaatca tgtctgcatc tccaggggag aaggtcacca tgacctgcag agccagttca 1320

agtgtaagtt acatgaactg gtaccagcag aagtcaggca cctcccccaa aagatggatt 1380

tatgacacat ccaaagtggc ttctggagtc ccttatcgct tcagtggcag tgggtctggg 1440

acctcatact ctctcacaat cagcagcatg gaggctgaag atgctgccac ttattactgc 1500

caacagtgga gtagtaaccc gctcacgttc ggtgctggga ccaagctgga gctgaaatag 1560

<210> 111
<211> 499
<212> PRT
<213> Homo sapiens

<400> 111

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val

```
    50                  55                  60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65                  70                  75                  80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                85                  90                  95

Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
    130                 135                 140

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Ser Arg Tyr
145                 150                 155                 160

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
                165                 170                 175

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val
            180                 185                 190

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
        195                 200                 205

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
    210                 215                 220

Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
225                 230                 235                 240

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser
                245                 250                 255

Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala
            260                 265                 270

Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr
        275                 280                 285
```

```
Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
    290                 295                 300

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe
305                 310                 315                 320

Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr
                325                 330                 335

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
            340                 345                 350

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
        355                 360                 365

Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly
    370                 375                 380

Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu Thr Gln Ser
385                 390                 395                 400

Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys
                405                 410                 415

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser
            420                 425                 430

Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
        435                 440                 445

Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
    450                 455                 460

Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
465                 470                 475                 480

Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu
                485                 490                 495

Glu Leu Lys
```

<210> 112
<211> 1635
<212> DNA
<213> Homo sapiens

<400> 112
atggaaaccc cagcgcagct tctcttcctc ctgctactct ggctcccaga taccaccgga 60

gatattgtga tgacccagac tccactctcc ctgcccgtca cccctggaga gccggcctcc 120

atctcctgca ggtctagtcg gagcctcttg gatagtgatg atggaaacac ctatttggac 180

tggtacctgc agaagccagg gcagtctcca cagctcctga tctacacgct ttcctatcgg 240

gcctctggag tcccagacag gttcagtggc agtgggtcag gcactgattt cacactgaaa 300

atcagcaggg tggaggctga ggatgttgga gtttattact gcatgcaacg tgtagagttt 360

cctatcacct tcggccaagg gacacgactg gagattaaac tttccgcgga cgatgcgaaa 420

aaggatgctg cgaagaaaga tgacgctaag aaagacgatg ctaaaaagga cctgcaggtg 480

cagctggtgg agtctggggg aggcgtggtc cagcctggga ggtccctgag actctcctgt 540

gcagcgtctg gattcatctt cagtcgctat ggcatgcact gggtccgcca ggctccaggc 600

aaggggctga aatgggtggc agttatatgg tatgatggaa gtaataaact ctatgcagac 660

tccgtgaagg gccgattcac catctccaga gacaattcca agaacacgct gtatctgcaa 720

atgaacagcc tgagagccga ggacacggct gtgtattact gtgcgagaga ttactatgat 780

aatagtagac atcactgggg gtttgactac tggggccagg gaaccctggt caccgtctcc 840

tcaggaggtg gtggatccga tatcaaactg cagcagtcag gggctgaact ggcaagacct 900

ggggcctcag tgaagatgtc ctgcaagact tctggctaca cctttactag gtacacgatg 960

cactgggtaa aacagaggcc tggacagggt ctggaatgga ttggatacat taatcctagc 1020

cgtggttata ctaattacaa tcagaagttc aaggacaagg ccacattgac tacagacaaa 1080

tcctccagca cagcctacat gcaactgagc agcctgacat ctgaggactc tgcagtctat 1140

tactgtgcaa gatattatga tgatcattac tgccttgact actggggcca aggcaccact 1200

ctcacagtct cctcactttc cgcggacgat gcgaaaaagg atgctgcgaa gaaagatgac 1260

gctaagaaag acgatgctaa aaaggacctg gacattcagc tgacccagtc tccagcaatc 1320

atgtctgcat ctccagggga gaaggtcacc atgacctgca gagccagttc aagtgtaagt 1380

tacatgaact ggtaccagca gaagtcaggc acctccccca aaagatggat ttatgacaca 1440

tccaaagtgg cttctggagt cccttatcgc ttcagtggca gtgggtctgg gacctcatac 1500

tctctcacaa tcagcagcat ggaggctgaa gatgctgcca cttattactg ccaacagtgg 1560

agtagtaacc cgctcacgtt cggtgctggg accaagctgg agctgaaaga ttataaggac 1620

gatgatgaca aatag 1635

<210> 113
<211> 524
<212> PRT
<213> Homo sapiens

<400> 113

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Arg Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys Leu Ser Ala Asp Asp Ala Lys Lys Asp Ala Ala Lys Lys Asp Asp
115 120 125

Ala Lys Lys Asp Asp Ala Lys Lys Asp Leu Gln Val Gln Leu Val Glu
130 135 140

Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg Leu Ser Cys
145 150 155 160

Ala Ala Ser Gly Phe Ile Phe Ser Arg Tyr Gly Met His Trp Val Arg
165 170 175

```
Gln Ala Pro Gly Lys Gly Leu Lys Trp Val Ala Val Ile Trp Tyr Asp
            180                 185                 190

Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile
        195                 200                 205

Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu
    210                 215                 220

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Tyr Tyr Asp
225                 230                 235                 240

Asn Ser Arg His His Trp Gly Phe Asp Tyr Trp Gly Gln Gly Thr Leu
                245                 250                 255

Val Thr Val Ser Ser Gly Gly Gly Gly Ser Asp Ile Lys Leu Gln Gln
            260                 265                 270

Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys
        275                 280                 285

Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys
    290                 295                 300

Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser
305                 310                 315                 320

Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu
                325                 330                 335

Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu
            340                 345                 350

Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp
        355                 360                 365

His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
    370                 375                 380

Ser Leu Ser Ala Asp Asp Ala Lys Lys Asp Ala Ala Lys Lys Asp Asp
385                 390                 395                 400
```

```
Ala Lys Lys Asp Asp Ala Lys Lys Asp Leu Asp Ile Gln Leu Thr Gln
                405                 410                 415

Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr
            420                 425                 430

Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys
        435                 440                 445

Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala
    450                 455                 460

Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr
465                 470                 475                 480

Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr
                485                 490                 495

Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys
            500                 505                 510

Leu Glu Leu Lys Asp Tyr Lys Asp Asp Asp Asp Lys
        515                 520
```

<210> 114
<211> 169
<212> PRT
<213> Homo sapiens

<400> 114

```
Trp Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val
1               5                   10                  15

Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser
            20                  25                  30

Val Ser Ser Gly Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Pro Pro Gly
        35                  40                  45

Lys Gly Leu Glu Trp Ile Gly Phe Ile Tyr Tyr Thr Gly Ser Thr Asn
    50                  55                  60

Tyr Asn Pro Ser Leu Lys Ser Arg Val Ser Ile Ser Val Asp Thr Ser
65                  70                  75                  80
```

```
Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Ala
                85                  90                  95

Ala Val Tyr Tyr Cys Ala Arg Asp Tyr Asp Trp Ser Phe His Phe Asp
            100                 105                 110

Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160

Val Thr Val Ser Trp Asn Ser Gly Ala
                165
```

<210> 115
<211> 168
<212> PRT
<213> Homo sapiens

<400> 115

```
Gln Leu Leu Gly Leu Leu Leu Leu Trp Phe Pro Gly Ala Arg Cys Asp
1               5                   10                  15

Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly Asp
            20                  25                  30

Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp Leu
        35                  40                  45

Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile Tyr
    50                  55                  60

Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
65                  70                  75                  80

Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
                85                  90                  95
```

```
Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Leu Thr
            100                 105                 110

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro
        115                 120                 125

Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr
    130                 135                 140

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
145                 150                 155                 160

Val Gln Trp Lys Val Asp Asn Ala
                165
```

<210> 116
<211> 156
<212> PRT
<213> Homo sapiens

<400> 116

```
Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro
1               5                   10                  15

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr
            20                  25                  30

Asn Tyr Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala Asn Ile Gln Gln Asp Gly Ser Glu Lys Tyr Tyr Val Asp
    50                  55                  60

Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser
65                  70                  75                  80

Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Ser Ala Val Tyr
                85                  90                  95

Tyr Cys Ala Arg Trp Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
            100                 105                 110

Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys
        115                 120                 125
```

```
Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys
    130                 135                 140

Asp Tyr Phe Pro Glu Pro Val Ser Gly Val Val Glu
145                 150                 155
```

<210> 117
<211> 151
<212> PRT
<213> Homo sapiens

<400> 117

```
Leu Leu Gly Leu Leu Met Leu Trp Val Pro Gly Ser Ser Gly Asp Ile
1               5                   10                  15

Val Met Thr Gln Thr Pro Leu Ser Ser Thr Val Ile Leu Gly Gln Pro
            20                  25                  30

Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser Asp Gly
        35                  40                  45

Asn Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro Pro Arg
    50                  55                  60

Leu Leu Ile Tyr Met Ile Ser Asn Arg Phe Ser Gly Val Pro Asp Arg
65                  70                  75                  80

Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg
                85                  90                  95

Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Thr Glu
            100                 105                 110

Ser Pro Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
        115                 120                 125

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
    130                 135                 140

Lys Ser Gly Arg Ala Ser Val
145                 150
```

<210> 118
<211> 180
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 118

Xaa Xaa Xaa Xaa Glu Gln Ser Gly Gly Gly Val Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
20 25 30

Trp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Gly Arg Ile Lys Arg Arg Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

Leu Tyr Leu Gln Met Asn Asn Leu Lys Asn Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Thr Ser Val Asp Asn Asp Val Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

```
Ser Ser Gly Leu
            180


<210>  119
<211>  152
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (1)..(3)
<223>  Xaa is any amino acid

<400>  119

Xaa Xaa Xaa Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15


Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
            20                  25                  30


Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45


Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
    50                  55                  60


Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80


Ser Arg Val Glu Ala Glu Asp Ile Gly Leu Tyr Tyr Cys Met Gln Ala
                85                  90                  95


Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
            100                 105                 110


Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125


Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140


Tyr Pro Arg Glu Ala Lys Val Gln
145                 150
```

<210> 120
<211> 179
<212> PRT
<213> Homo sapiens

<400> 120

```
Gln Val Gln Leu Glu Gln Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1               5                  10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20                  25                  30

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Tyr Ile Arg Ser Ser Thr Ser Thr Ile Tyr Tyr Ala Glu Ser Leu
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Ser Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Asp Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
        115                 120                 125

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
    130                 135                 140

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
145                 150                 155                 160

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
                165                 170                 175

Ser Leu Ser
```

<210> 121
<211> 163

<212> PRT
<213> Homo sapiens

<400> 121

Glu Ile Gln Leu Thr Gln Ser Pro Leu Ser Ser Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
20 25 30

Asp Gly Asp Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro Gly Gln Pro
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Ile Ser Thr Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ala Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Thr Asp Asp Val Gly Ile Tyr Tyr Cys Met Gln Thr
85 90 95

Thr Gln Ile Pro Gln Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
115 120 125

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
130 135 140

Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
145 150 155 160

Gln Ser Gly

<210> 122
<211> 189
<212> PRT
<213> Homo sapiens

<400> 122

Gln Val Gln Leu Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg

```
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
    130                 135                 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165                 170                 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
            180                 185
```

<210> 123
<211> 157
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is Leu or Met

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is Thr or Leu

<400> 123

Asp Ile Gln Xaa Xaa Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Tyr Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
145 150 155

<210> 124
<211> 181
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(5)

<223> Xaa is any amino acid

<400> 124

```
Xaa Xaa Xaa Xaa Xaa Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Ala
            20                  25                  30

Trp Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Gly Arg Ile Lys Arg Lys Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
    50                  55                  60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Glu Asn Thr
65                  70                  75                  80

Leu Tyr Leu Gln Met Asn Ser Leu Glu Thr Glu Asp Thr Ala Val Tyr
                85                  90                  95

Tyr Cys Thr Thr Val Asp Asn Ser Gly Asp Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
        115                 120                 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
    130                 135                 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145                 150                 155                 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
                165                 170                 175

Ser Ser Gly Leu Ser
            180
```

<210> 125
<211> 159
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 125

Xaa Xaa Xaa Xaa Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala
85 90 95

Leu Gln Thr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
145 150 155

<210> 126
<211> 179
<212> PRT
<213> Homo sapiens

<400> 126

Gln Val Gln Leu Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr Asn Tyr
            20                  25                  30

Gly Leu His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser His Lys Phe Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Phe
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Thr Arg Asp Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
        115                 120                 125

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
    130                 135                 140

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
145                 150                 155                 160

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
                165                 170                 175

Ser Leu Ser
```

<210> 127
<211> 160
<212> PRT
<213> Homo sapiens

<400> 127

```
Glu Thr Gln Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
1               5                   10                  15
```

```
Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Asn
            20                  25                  30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65                  70                  75                  80

Pro Glu Asp Cys Ala Glu Cys Tyr Cys Gln Gln Tyr Gly Ser Ser Leu
                85                  90                  95

Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val
            100                 105                 110

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
        115                 120                 125

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
    130                 135                 140

Glu Ala Lys Val Gln Trp Glu Gly Gly Ile Thr Pro Ser Asn Arg Val
145                 150                 155                 160
```

<210> 128
<211> 180
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (62)..(62)
<223> Xaa is Tyr or Leu

<220>
<221> MISC_FEATURE
<222> (64)..(64)
<223> Xaa is Ala or Thr

<400> 128

```
Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
1               5                   10                  15
```

```
Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
            20                  25                  30

Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
        35                  40                  45

Glu Trp Val Ala Val Ile Trp Tyr Asp Gly Ser His Lys Xaa Tyr Xaa
    50                  55                  60

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
65                  70                  75                  80

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
                85                  90                  95

Tyr Tyr Ser Ala Arg Asp Tyr Tyr Asp Thr Ser Arg His His Trp Gly
            100                 105                 110

Phe Asp Cys Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
        115                 120                 125

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
    130                 135                 140

Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
145                 150                 155                 160

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
                165                 170                 175

His Thr Phe Pro
            180
```

<210> 129
<211> 173
<212> PRT
<213> Homo sapiens

<400> 129

```
Gln Leu Leu Gly Leu Leu Met Leu Trp Val Pro Gly Ser Ser Glu Glu
1               5                   10                  15

Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
```

```
            20                  25                  30

Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser Glu
        35                  40                  45

Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
    50                  55                  60

Pro Gln Leu Leu Ile Tyr Thr Leu Ser His Arg Ala Ser Gly Val Pro
65                  70                  75                  80

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
                85                  90                  95

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Cys Cys Met Gln Arg
            100                 105                 110

Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
        115                 120                 125

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
    130                 135                 140

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
145                 150                 155                 160

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
                165                 170


<210>  130
<211>  187
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (1)..(5)
<223>  Xaa is any amino acid

<400>  130

Xaa Xaa Xaa Xaa Xaa Gln Ser Gly Pro Arg Leu Val Lys Pro Ser Gln
1               5                   10                  15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Asp
```

```
            20                  25                  30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Phe Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Ala Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Glu Ser Pro His Ser Ser Asn Trp Tyr Ser Gly Phe Asp
            100                 105                 110

Cys Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu
    130                 135                 140

Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Arg Thr
145                 150                 155                 160

Gly Asp Gly Val Val Glu Leu Arg Arg Pro Asp Gln Arg Arg Ala His
                165                 170                 175

Leu Pro Gly Cys Pro Thr Val Leu Arg Thr Leu
            180                 185


<210>  131
<211>  154
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (1)..(4)
<223>  Xaa is any amino acid

<400>  131

Xaa Xaa Xaa Xaa Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
```

```
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Arg
            20                  25                  30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
        35                  40                  45

Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
65                  70                  75                  80

Glu Asp Ala Ala Thr Tyr Tyr Cys His Gln Ser Ser Asn Leu Pro Phe
                85                  90                  95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg Thr Val Ala Ala
            100                 105                 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115                 120                 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu
145                 150


<210>  132
<211>  178
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (6)..(6)
<223>  Xaa is Glu or Gln

<220>
<221>  MISC_FEATURE
<222>  (59)..(59)
<223>  Xaa is Tyr or Leu

<400>  132
```

```
Gln Val Gln Leu Val Xaa Ala Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Ser Tyr
            20                  25                  30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Xaa Tyr Thr Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Val Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
            100                 105                 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
    130                 135                 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Arg Arg Arg Ala His Leu
                165                 170                 175

Pro Gly
```

<210> 133
<211> 156
<212> PRT
<213> Homo sapiens

<400> 133

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Arg Cys Ala Ser Val Gly
1               5                   10                  15
```

```
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Asp
            20                  25                  30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile
        35                  40                  45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

Ser Arg Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                  70                  75                  80

Glu Asp Phe Ala Ala Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro Pro
                85                  90                  95

Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
            100                 105                 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115                 120                 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145                 150                 155
```

<210> 134
<211> 171
<212> PRT
<213> Homo sapiens

<400> 134

```
His Val Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro
1               5                   10                  15

Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Ser
            20                  25                  30

Arg Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Lys
        35                  40                  45
```

```
Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp
    50                  55                  60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr
65                  70                  75                  80

Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
                85                  90                  95

Tyr Cys Ala Arg Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe
            100                 105                 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
        115                 120                 125

Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser
    130                 135                 140

Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
145                 150                 155                 160

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu
                165                 170


<210>  135
<211>  174
<212>  PRT
<213>  Homo sapiens

<400>  135

Ser Ala Pro Gly Ala Ala Asn Ala Leu Gly Pro Trp Ile Ser Glu Asp
1               5                   10                  15

Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly Glu
            20                  25                  30

Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Ser Leu Leu Asp Ser Asp
        35                  40                  45

Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
    50                  55                  60

Pro Gln Leu Leu Ile Tyr Thr Leu Ser Tyr Arg Ala Ser Gly Val Pro
65                  70                  75                  80
```

```
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
                85                  90                  95

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Arg
            100                 105                 110

Val Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
        115                 120                 125

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
    130                 135                 140

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
145                 150                 155                 160

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala
                165                 170
```

<210> 136
<211> 186
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(4)
<223> Xaa is any amino acid

<400> 136

```
Xaa Xaa Xaa Xaa Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20                  25                  30

Gly Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
```

```
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Asp Phe Tyr Asp Ser Ser Arg Tyr His Tyr Gly Met Asp Val
            100                 105                 110

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
    130                 135                 140

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165                 170                 175

Pro Ala Val Leu Gln Ser Ser Gly Leu Ser
            180                 185


<210>  137
<211>  143
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<222>  (1)..(4)
<223>  Xaa is any amino acid

<400>  137

Xaa Xaa Xaa Xaa Thr Gln Cys Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                   10                  15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
            20                  25                  30

Asp Asp Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
        35                  40                  45

Ser Pro Gln Leu Leu Ile Tyr Thr Val Ser Tyr Arg Ala Ser Gly Val
    50                  55                  60
```

```
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65                  70                  75                  80


Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
                85                  90                  95


Arg Ile Glu Phe Pro Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
            100                 105                 110


Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
        115                 120                 125


Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn
    130                 135                 140


<210>  138
<211>  10
<212>  PRT
<213>  Homo sapiens

<400>  138

Gly Phe Thr Phe Thr Asn Tyr Gly Leu His
1               5                   10


<210>  139
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  139

Val Ile Trp Tyr Asp Gly Ser His Lys Phe Tyr Ala Asp Ser Val Lys
1               5                   10                  15


Gly



<210>  140
<211>  4
<212>  PRT
<213>  Homo sapiens

<400>  140

Asp Leu Asp Tyr
1
```

<210> 141
<211> 12
<212> PRT
<213> Homo sapiens

<400> 141

Arg Ala Ser Gln Ser Val Ser Asn Asn Tyr Leu Ala
1 5 10

<210> 142
<211> 7
<212> PRT
<213> Homo sapiens

<400> 142

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 143
<211> 10
<212> PRT
<213> Homo sapiens

<400> 143

Gln Gln Tyr Gly Ser Ser Leu Pro Leu Thr
1 5 10

<210> 144
<211> 10
<212> PRT
<213> Homo sapiens

<400> 144

Gly Phe Thr Phe Ser Ser Tyr Gly Met Tyr
1 5 10

<210> 145
<211> 17
<212> PRT
<213> Homo sapiens

<400> 145

Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 146
<211> 14
<212> PRT
<213> Homo sapiens

<400> 146

Asp Phe Tyr Asp Ser Ser Arg Tyr His Tyr Gly Met Asp Val
1 5 10

<210> 147
<211> 17
<212> PRT
<213> Homo sapiens

<400> 147

Arg Ser Ser Gln Ser Leu Leu Asp Ser Asp Asp Gly Asn Thr Tyr Leu
1 5 10 15

Asp

<210> 148
<211> 7
<212> PRT
<213> Homo sapiens

<400> 148

Thr Val Ser Tyr Arg Ala Ser
1 5

<210> 149
<211> 9
<212> PRT
<213> Homo sapiens

<400> 149

Met Gln Arg Ile Glu Phe Pro Ile Thr
1 5

<210> 150
<211> 12
<212> PRT
<213> Homo sapiens

<400> 150

Gly Gly Ser Ile Ser Ser Asp Gly Tyr Tyr Trp Ser
1 5 10

<210> 151
<211> 16
<212> PRT
<213> Homo sapiens

<400> 151

Tyr Ile Tyr Tyr Ser Gly Ser Thr Phe Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 152
<211> 14
<212> PRT
<213> Homo sapiens

<400> 152

Glu Ser Pro His Ser Ser Asn Trp Tyr Ser Gly Phe Asp Cys
1 5 10

<210> 153
<211> 11
<212> PRT
<213> Homo sapiens

<400> 153

Arg Ala Ser Gln Ser Ile Gly Ser Arg Leu His
1 5 10

<210> 154
<211> 7
<212> PRT
<213> Homo sapiens

<400> 154

Tyr Ala Ser Gln Ser Phe Ser
1 5

<210> 155
<211> 9
<212> PRT
<213> Homo sapiens

<400> 155

His Gln Ser Ser Asn Leu Pro Phe Thr
1 5

<210> 156
<211> 10
<212> PRT
<213> Homo sapiens

<400> 156

Gly Phe Ile Phe Ser Arg Tyr Gly Met His
1 5 10

<210> 157
<211> 17
<212> PRT
<213> Homo sapiens

<400> 157

Val Ile Trp Tyr Asp Gly Ser Asn Lys Leu Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 158
<211> 14
<212> PRT
<213> Homo sapiens

<400> 158

Asp Tyr Tyr Asp Asn Ser Arg His His Trp Gly Phe Asp Tyr
1 5 10

<210> 159
<211> 17
<212> PRT
<213> Homo sapiens

<400> 159

Arg Ser Ser Arg Ser Leu Leu Asp Ser Asp Asp Gly Asn Thr Tyr Leu
1 5 10 15

Asp

<210> 160

<211> 7
<212> PRT
<213> Homo sapiens

<400> 160

Thr Leu Ser Tyr Arg Ala Ser
1 5

<210> 161
<211> 9
<212> PRT
<213> Homo sapiens

<400> 161

Met Gln Arg Val Glu Phe Pro Ile Thr
1 5

<210> 162
<211> 10
<212> PRT
<213> Homo sapiens

<400> 162

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Gly Phe Thr Phe Ser Thr Tyr Ser Met Asn
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